Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TETSUHIRO SUZUKI

Appeal No. 1997-3158
Application No. 08/490,553

HEARD: Feb 10, 2000

Before KRASS, LALL, and GROSS, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 4, all of the pending claims.

The invention is directed to a magnetoresistive head for reading and writing to magnetic disks and tapes. More particularly, the invention is a yoke-type magnetoresistive head wherein a first and second magnetic yoke each has one end

opposed to one end of the other yoke with a gap left between them. The yokes do not overlap except at the gap. This structure is said to permit a high bit density recording, low distortion and high sensitivity since the size of the gap can be accurately controlled during manufacture, and it is the size of the gap which determines the track width of the magnetoresistive head and its recording bit density.

Independent claim 1 is reproduced as follows:

> 1. A magnetoresistive head which includes a magnetic circuit including a first magnetic yoke and a second magnetic yoke, each yoke having one end opposed to one end of the other yoke with a gap left therebetween, a first magnetoresistive element magnetically coupled to the other end of said first magnetic yoke, a second magnetoresistive element magnetically coupled to the other end of said second magnetic yoke, and a third magnetic yoke for magnetically coupling said first magnetoresistive element and second magnetoresistive element to each other,
>
> wherein said first and second magnetic yokes are disposed without overlapping each other except at said gap, and said first and second magnetoresistive elements are formed by simultaneous disposition.

The examiner relies on the following references:

Yamada et al. (Yamada)	4,954,920	Sep. 04, 1990
Ju et al. (Ju)	5,375,023	Dec. 20, 1994

Mino	JP 58-222403	Dec. 24, 1983
Yagi	JP 61-904	Jan. 06. 1986

Claims 1 through 4 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites Yamada and Ju with regard to claims 1 and 2, adding Mino to the basic combination with regard to claim 3 and adding Yagi to the basic combination with regard to claim 4.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

We reverse.

Claim 1 specifically calls for the first and second magnetic yokes to be disposed "without overlapping each other except at said gap." The primary reference, Yamada, shows no more than that admitted to be prior art by appellant, and the examiner admits that Yamada does not disclose the yokes overlapping at the gap. The examiner relies on Ju for the teaching of yokes overlapping at a gap, and the examiner

concludes that it would have been obvious to combine Yamada and Ju in order to modify Yamada by forming the first ends of magnetic yokes 2 so as to overlap in a gap area. The rationale presented by the examiner is that one would form the yokes to have overlapping ends in Yamada in order to achieve submicron track widths.

While Ju discloses an overlap of the yokes, or rather the pole tip portions of the yokes, at the gap, claim 1 requires that the yokes overlap *only* at the gap and that they specifically do not overlap anywhere else. While it may be that this is the case in Ju, we simply do not know as Ju only shows a portion of the yokes, i.e., the pole tip portions of the yokes, and there is no disclosure or suggestion within the disclosure of Ju that the remaining portions of the yokes do not overlap. Accordingly, to surmise that these other portions of the yokes in Ju do not, in fact, overlap, would require a resort to speculation which is not a proper basis for a rejection under 35 U.S.C. § 103. There is clearly no disclosure in Ju that anything is achieved by overlapping the yokes at the gap but requiring no overlap at any other point.

The requirement of claim 1 that the yokes do not overlap anywhere else but at the gap is apparently of no interest to Ju. Therefore, we simply have no basis to conclude, as the examiner apparently has, that the yokes in Ju do not overlap anywhere but at the gap.

Furthermore, we find no cogent rationale presented by the examiner as to why the skilled artisan would have combined the teachings of Yamada and Ju since they deal with different structures and, even if combined, we fail to see how the instant claimed subject matter would be achieved. That is, why modify the structure of Yamada so drastically as to have the yoke pieces of Yamada overlap? If the purpose is to "achieve submicron track widths," as contended by the examiner, it is unclear why the artisan would look to Ju since Yamada itself discloses a way to reduce the track width, i.e., reduce the thickness of the yokes [column 1, lines 59-60 of Yamada].

The examiner's decision rejecting claims 1 through 4 under 35 U.S.C. § 103 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)	
PARSHOTAM S. LALL Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ANITA PELLMAN GROSS Administrative Patent Judge	)	

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